

Serial No. 10/739,223

Amendment AF Dated: January 11, 2007
Reply to Office Action Mailed: October 11, 2006
Attorney Docket No. 056203.50959C1

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-19. (Cancelled)

Claim 20. (Currently Amended) A control apparatus for a vehicle having obstruction detection means including radar apparatus for measuring a headway distance to an obstruction existing ahead of said vehicle, [[and]] said apparatus comprising:

control means for performing a plurality of operation-support functions by controlling at least a throttle, brakes and a transmission of said vehicle according to the headway distance to the obstruction; [[,]] said apparatus comprising:

means for detecting a detection performance level of said obstruction detection means; and

means for causing said control means to individually enable or interrupt operation of said plurality of operation support functions in accordance with said detection performance level.

Claim 21. (Previously Presented) A control apparatus for a vehicle according to Claim 20, further comprising means for notifying a driver regarding a state of an operation or stop of said plurality of operation support functions.

Claim 22. (Previously Presented) A control apparatus according to Claim 20, further comprising means for classifying detection performance of said obstruction detection means into one of at least three different levels.

Claim 23. (Previously Presented)) A control apparatus according to Claim 22, wherein:

 said plurality of operation support functions includes at least an alarm control; and

 said alarm control is enabled even though the detected detection performance level of said obstruction detection means is classified into a lowest level among said at least three different levels.

Claim 24. (Previously Presented) A control apparatus according to Claim 20, wherein the following are determined:

a limit value of detection performance level required for each of said plurality of operation support functions; is determined; and

an operation support function having a limit value higher than the detected detection performance level of said obstruction detection means.

Claim 25. (Previously Presented) A control apparatus according to Claim 24, wherein:

said operation support functions includes an adaptive cruise control and an alarm control; and

the limit value of detection performance level required for the adaptive cruise control is higher than the limit value of detection performance level required for said alarm control.

Claim 26. (Previously Presented) A control apparatus according to Claim 20, wherein:

said control apparatus further comprises means for notifying a driver of information concerning a relation between said vehicle and said obstruction on the basis of the measured headway distance; and

a method of notifying the driver of said information is changed according to the detected detection performance level.

Claim 27. (Previously Presented) A control apparatus according to Claim 20, wherein said means for detecting a detection performance level of said obstruction detection means;

sets an initial value for a selected distance which is one of i) a distance at which an obstruction approaching said vehicle begins to be detected, and ii) a distance at which an obstruction receding from said vehicle begins to be missed when said obstruction detection means is normal;

calculates a current value of the selected distance; and

compares said initial value with said current value to thereby judge detection performance level of said obstruction detection means.

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Claim 28. (Previously Presented) A control apparatus according to Claim 20, wherein said obstruction detection means is a millimeter-wave radar.